2003 South East Research Farm Inc. Project Results Update – Economic Analysis of Field Scale 'Pesticide Free Production™' of Flaxseed

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Abstract

The flax variety *CDC Bethune* was grown under two cropping systems. The most common conventional method will be compared to growing flax under the Pesticide Free Production™ (PFP™) guidelines. Two PFP™ treatments will be compared to one conventionally grown treatment. Economic analysis will be completed on each of the three treatments to determine if PFP™ is economically viable in field scale production of flaxseed. Average market prices from October 1, 2003 to March 1, 2004 for each system will be used in the analysis. Net yields between each crop were not significant, but final economic analysis will determine differences.

Background and Objectives of Study

Pesticide-Free Production™ involves planting a non-GMO seed in fields where residual pesticides are not commercially active, and then raising and harvesting the crop without the use of chemical pest control methods. The main advantage of PFP™ (besides possible price premiums) is that it brings together tools from conventional and organic farming and as such, the system is easily adopted by producers. It is a very flexible farming system, allowing full use of commercial fertilizers and some latitude with pesticides outside of the PFP™ crop's growing season.

The field scale study was initiated following a small plot trial conducted at the South East Research Farm the season prior. Field history indicated that flax would be a good crop option for the PFP™ project. The objective of the field scale research is to determine whether or not the implementation of "Pesticide Free Production" is economically viable in field scale production of flaxseed.

Study Description

The field portion of this study occurred near Fairlight Saskatchewan. Certified seed of the flax variety *CDC Bethune* was selected. Three treatments were used, one was conventional and the other two being PFP™. The complete field received a pre-seeding application of 1 L per acre of Touchdown on May 27. All three treatments received the same rate of fertilizer that was sidebanded at seeding. The fertilizer was a granular blend of 60-25-0-10. The conventional

treatment was treatment one, the seeding rate was 45 lbs/ac on June 6th. Treatments two and three were grown using PFP™ guidelines with increased seeding rates of 56 lbs/ac. Treatment two was seeded in one pass on June 6th. Treatment three was seeded in two passes each at the seeding rate. During the first pass the full rate of fertilizer was applied. The second pass was seeded perpendicular to the first. The third treatment was seeded on June 8th due to precipitation received on June 6th.

Herbicide control was required in treatment one, Flaxmax (50g/L clopyralid and 280 g/L MCPA ester) was applied at 27 acres per case (0.61 L/ac) on July 12 to help control weeds.

Harvesting occurred over two days; September 23rd and 25th were the dates. Measured strips in each treatment were harvested to calculate yield and dockage. Conventional grown flax was delivered to SWP Fairlight and the PFP™ grown flax was binned for sale in the PFP™ market.

Results and Conclusions

An economic analysis will be completed for each treatment during the winter of 2004 with final results expected in spring of 2004. Average market price from October 1, 2003 to March 1, 2004 will be used for each production system. This will alleviate the ability to control value of production by controlling the date of sale for each commodity.

Gross harvest yields and dockage is shown in Table 1. Differences between net yields of each treatment are not significant. Complete economic analysis will determine differences between each treatment. Once final analysis is complete it will be made available to all interested through the South East Research Farm. To contact SERF please call 306-452-3161 or email serf@sasktel.net to request results.

Table 1. 2003 Gross and Net Yield of Flax Produced near Fairlight, SK.

Treatments	Gross Yield (bu/ac)	Dockage (%)	Net Yield (bu/ac)
Conventional	25.1	3.6	24.8
Single seeded PFP	26.7	9.6	24.6
Cross seeded PFP	25.6	7.2	24.3

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